

IFMIF-DONES facility: a key accelerator neutron source for the design of DEMO

Wednesday 2 March 2022 16:45 (1 hour)

The International Fusion Materials Irradiation Facility Demo Oriented NEutron Source (IFMIF-DONES) will be a novel research infrastructure for testing, validation and qualification of the materials to be used in a fusion reactor like DEMO. IFMIF DONES will mimic the conditions inside DEMO in terms of neutrons by the impact of a high-power deuteron beam onto a lithium target. Together with ITER (International Thermonuclear Experimental Reactor) it is the key facility to design DEMO. In view of the urgent need of data on materials and their durability, the construction of DONES (DEMO-Oriented Neutron Source) was decided. The IFMIF facility will consist of two accelerators delivering deuterons on the same neutron production target, whereas, DONES will consist of a single accelerator. Granada (Spain) was selected as the European city hosting the construction of the facility and the facility itself has been selected as ESFRI (European Strategy Forum on Research Infrastructures). In this talk an overview of the facility and its objectives will be carried out. Also, the complementary applications program will be briefly discussed.

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Session Classification: Invited Talk